February 29, 2024

Bank of Japan

Economic Activity, Prices, and Monetary Policy in Japan

Speech at a Meeting with Local Leaders in Shiga

TAKATA Hajime *Member of the Policy Board*

(English translation based on the Japanese original)

I. Economic Activity and Prices

A. Current Situation

Please allow me first to express my deepest sympathy for the lives lost in the Noto Peninsula Earthquake and to offer my sincere condolences to all those affected.

I will begin by talking about the current situation of economic activity and prices. The pace of recovery in overseas economies has slowed. Chart 1 shows developments in the global economy as presented in the January 2024 *World Economic Outlook* (WEO) *Update* released by the International Monetary Fund (IMF). Let us take a detailed look by country and region. Despite the effects of substantial policy interest rate hikes, the U.S. economy has been firm, mainly led by private consumption, and is likely to remain so. European economies have kept slowing moderately as they have continued to be affected by factors such as policy interest rate hikes. However, these economies will likely pick up gradually once the slowing trend passes. Extremely high uncertainties surround the Chinese economy, mainly owing to the effects of a slowdown in external demand and adjustments in the real estate market.

Japan's economy has recovered moderately. Looking at Chart 2, real GDP decreased for the latest October-December quarter, registering minus 0.4 percent on an annualized basis. This was mainly due to the decline in private consumption, with the effects of price rises and weather conditions seen in part. However, as shown in Chart 3, Japan's real GDP has remained above the level in the pre-pandemic period of 2019, supported by such factors as the materialization of pent-up demand. The output gap has followed an improving trend (Chart 4).

As for prices, the year-on-year rate of increase in the consumer price index (CPI) for all items excluding fresh food has been around 2 percent recently. This is mainly because, despite waning, the effects of the pass-through to consumer prices of cost increases led by the past rise in import prices have remained, and because services prices have also increased moderately (Chart 5).

B. Outlook

I would like to explain the Bank of Japan Policy Board members' baseline scenario of the outlook for economic activity and prices in Japan.

The economy is likely to continue recovering moderately for the time being, supported by the materialization of pent-up demand, as well as by factors such as accommodative financial conditions and the government's economic measures, although it is expected to be under downward pressure stemming from a slowdown in the pace of recovery in overseas economies. Chart 6 shows the forecasts for economic activity and prices presented in the January 2024 *Outlook for Economic Activity and Prices* (Outlook Report). In terms of the median of the members' forecasts, the real GDP growth rate is projected to be 1.8 percent for fiscal 2023, 1.2 percent for fiscal 2024, and 1.0 percent for fiscal 2025.

In terms of the median of the members' forecasts in the January 2024 Outlook Report, the year-on-year rate of increase in the CPI (all items less fresh food) is projected to be 2.8 percent for fiscal 2023, 2.4 percent for fiscal 2024, and 1.8 percent for fiscal 2025. Compared with the forecasts made in the October 2023 Outlook Report, the projected rate of increase for fiscal 2024 is lower mainly due to a decline in crude oil prices.

C. Risks to the Outlook

Developments in overseas economic activity and prices pose a risk to the outlook I just mentioned. Following the shift to a floating exchange rate system in the 1970s, the monetary policy stances of advanced economies and their corresponding economic cycles were largely in sync. However, there has recently been significant difference between economic cycles in Japan and those abroad, partly reflecting differences in how COVID-19 evolved and how monetary policies developed in response. While some have apparently signaled future policy interest rate reductions, central banks in the United States and Europe have continued to conduct tight monetary policy. Japan's economy is likely to continue recovering moderately, partly owing to the effects of large-scale monetary easing and the government's economic measures. Nevertheless, since the policy interest rate hikes to date have been rapid in the United States and Europe, there is a risk that Japan's economic activity will be under stronger downward pressure if these hikes affect the global real economy and financial conditions with a time lag.

In addition to these points, close attention is warranted over how geopolitical risks, such as those concerning Ukraine and the Middle East, will affect the world economy, global financial markets, and the price of commodities, including grain.

II. Recent Conduct of Monetary Policy

Let me now present my views on the Bank's conduct of monetary policy.

The Bank currently conducts monetary policy under the framework of Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control, aiming to achieve the price stability target of 2 percent. In continuing with this framework, the Bank has conducted monetary policy while constantly reviewing the positive effects and the side effects. During that process, to enhance the sustainability of large-scale monetary easing under the current framework, mainly in response to deterioration in market functioning, the Bank has been modifying the conduct of yield curve control since 2022. If upward movements in prices and inflation expectations continued, strictly capping 10-year Japanese government bond (JGB) yields could have affected the functioning of bond markets and the volatility in other financial markets. The Bank's latest modifications were aimed at mitigating such side effects. As Chart 7 shows, with the low interest rate environment being maintained, short- and long-term real interest rates have been at low levels even after the Bank's modifications to date, indicating that accommodative financial conditions have continued.

My own view on the current situation of Japan's economy is that, while there are uncertainties, achievement of the 2 percent price stability target has finally started to come in sight with the Bank's patient continuation of monetary easing. In other words, firms' price- and wage-setting behavior has changed, and this change has helped the economy to (1) achieve a virtuous cycle of improvement in corporate profits and continued wage hikes that reflect price increases, and (2) reach an inflection point where there is a long-awaited shift away from the deeply-entrenched norm that wages and prices do not rise. These changes have been achieved through the following three phrases.

Let me explain the three phases in detail using Chart 8. In the first phase, higher raw material prices originating abroad caused cost-push pressure in the latter half of 2022, which is the first big push, and this accelerated the pass-through of cost increases to goods prices. In the second phase, wage hikes resulting from the spring 2023 labor-management wage negotiations caused cost increases, or the second big push, and firms have been passing on some of these cost increases to prices, including services prices. The price change distribution by item in the CPI shows that the distribution has recently shifted further into positive territory, with the height of the peak, which remains at around 0 percent, becoming lower than that in the pre-pandemic period (Chart 9). Last spring's wage negotiations achieved a wage increase of 3.6 percent, a level not seen since the early 1990s (Chart 10). Services prices have also been rising moderately. Although the contribution of services prices to the rise in the CPI (all items less food and energy) remains small compared with the United States and Europe, the proportion of such prices in the contribution has been steadily expanding, already reaching more than 50 percent. As wage growth inherently has a high degree of inertia, or stickiness, it tends to push up prices in a sustained manner.¹ Base pay increases in particular are regarded as rises in permanent income, rather than temporary increases in income; therefore, they act as a large driving force for boosting consumption. With regard to wage revisions for spring 2024, the ongoing labor-management wage negotiations suggest that there is growing momentum toward raising wages, with many firms announcing their plans for higher wage hikes than in 2023. If high wage increases are achieved, as was the case in spring 2023, expectations for sustainable higher income will likely tend to increase. In this context, in the third and final phase, inflation expectations have been on the rise (Chart 11). In my view, the Phillips curve is shifting upward, owing in part to the many years of monetary easing, after the downward shift during the post-bubble deflationary period (Chart 12). My interpretation is that this upward shift in the Phillips curve has started to lead to the achievement of sustained inflation as the materialization of the third phase.

¹ The following paper explains empirically, using Japanese data, that the pass-through to CPI inflation of an increase in wages rises once the increase exceeds a certain threshold, and when the increase is well above the threshold, a large pass-through tends to be sustained.

See Nakajima, J., Sasaki, T., and Yamamoto, H., "Nonlinear Input Cost Pass-through to Consumer Prices: A Threshold Approach," *Bank of Japan Working Paper Series*, no. 23-E-9 (May 2023).

As explained, it seems that Japan's economy has reached the point where achievement of the price stability target has finally started to come in sight through the process of these three phases. Still, I believe that it is necessary to continue to pay attention to (1) the change in firms' price- and wage-setting behavior amid the subsiding of firms' pass-through of cost increases to prices led by cost-push factors and (2) the uncertainties regarding overseas economies that I mentioned earlier. At the same time, while being mindful of keeping a good balance between the positive effects and the side effects of monetary easing, I consider that the Bank needs to examine ways to make nimble and flexible responses, including taking steps toward an exit from the current monetary policy. Namely, this involves shifting gears down from the current extremely powerful monetary easing by means of, for instance, terminating the yield curve control framework and the negative interest rate policy, and reconsidering the treatment of the inflation-overshooting commitment.

III. My Personal View on the Review of Monetary Policy from a Broad Perspective

I have discussed the Bank's recent conduct of monetary policy and my thoughts regarding it. It can be said that it has taken a long time for Japan's economy to get to this point. In what follows, I would like to share my personal view from a historical perspective regarding the impact that various changes in the economic environment since the 1990s have had on firms' and households' behavior and on the wage and price formation mechanisms. I would like to frame my remarks in light of the review of monetary policy from a broad perspective currently being conducted by the Bank.

Post-Bubble Changes in Firms' Behavior and the Entrenchment of the Norm

Looking at trends in the growth rate, Japan's economy continued to grow at a high rate through the 1980s, buoyed in part by the aftereffects of its period of rapid growth (Chart 13). From the 1990s, however, with the collapse of the bubble economy, the economy turned downward and continued to experience low growth. The growth rate dropped further in the 2000s, exacerbated in part by the effects of the financial crisis in Japan and the Global Financial Crisis. Although economic growth has recovered somewhat since the 2010s, it still lags behind past levels.

Although a variety of factors contributed to the slowdown in growth, including demographic changes, I believe that the major cause was the change in the behavior of firms and households in response to post-bubble changes in the economic environment. Specifically, as Chart 14 shows, in the context of significant asset deflation, an increasing number of firms sought to pursue management with minimum assets by paring down assets on their balance sheets and reining in investment, while also engaging in business restructuring to cope with mounting international competition by reducing costs in their income statements. The term "restructuring" fundamentally means reorganization of operations, but in Japan the definition was extremely narrow, denoting cost cutting and downsizing. In response to changing business conditions, management with minimum assets and business restructuring were rational moves for individual firms. From a macroeconomic perspective, however, this approach caused Japan to fall into a shrinking equilibrium due to the "fallacy of composition" -- assuming that what is true of one member of a group is true for the group as a whole. Meanwhile, in a deflationary environment, it was rational for households to hold their assets in cash and deposits. Today, household financial assets in Japan exceed 2,100 trillion yen. Nevertheless, unlike in the United States and Europe, Japanese households have exhibited a growing preference for holding assets in cash and deposits, with cash accounting for more than half of their financial assets, and they have come to avoid holding risk assets. By way of asset deflation, this has ended up contributing to a shrinking equilibrium on the macroeconomic level, as households have been unwilling to allocate their assets to risk money.

Firms' approach of pursuing management with minimum assets and business restructuring not only reined in business fixed investment but also suppressed human capital. These factors together are considered to have brought down Japan's potential growth rate (Chart 15). In relation to the potential growth rate, I would like to highlight trends in the natural rate of interest. The natural rate of interest refers to the real interest rate at which economic activity and prices neither accelerate nor decelerate. Reflecting the post-bubble decline in the potential growth rate, the estimated natural rate of interest also followed a long-term downtrend, although this should be interpreted with latitude. The basic mechanism of monetary easing consists of driving the real interest rate below the natural rate of interest. However, faced with the effective lower bound on short-term nominal interest rates (the zero lower bound), the Bank stepped in to implement various unconventional monetary policy

measures, beyond conventional monetary policy, in an effort to bring real interest rates down. For instance, the Bank implemented forward guidance including the policy duration effect exerted through the Bank's commitment to continue with monetary easing, introduced a negative interest rate policy, and implemented yield curve control to influence the entire yield curve. Japan thus turned out to be a historical frontrunner of such unconventional monetary policy.

At this point, I would like to recall from a historical perspective the asset deflation that led firms to pursue management with minimum assets and encouraged households to hold assets in cash and deposits. At its peak in the 1980s, Japan accounted for nearly half of global market capitalization. As Chart 16 shows, however, from the 1990s, while the U.S. and other economies continued to expand steadily, Japan's economy remained stagnant for many years, out of step with growth in the rest of the world. The essence of the post-bubble crisis in Japan was a drop in asset prices, or asset deflation, rather than a fall in the general price level. Land prices in major cities in Japan plummeted by about 70 to 80 percent from their peak, causing serious damage to the financial system. Meanwhile, an increasing number of firms pursued management with minimum assets on their balance sheets while also reining in investment and reducing interest-bearing debt. As a result, as Chart 17 shows, the capital adequacy ratios of Japanese firms continued to increase. In addition, these firms became more inclined to hoard cash and deposits as a precautionary measure.

Next, I would like to look back on the competitive environment vis-à-vis other economies that led to the business restructuring of Japanese firms. The world economy became increasingly globalized after the fall of the Berlin Wall in 1989. Meanwhile, through the 1980s, as its economic presence grew, Japan saw mounting trade friction, followed by a rapid appreciation of the yen in the 1990s (Chart 18). Faced with such acute trade friction, Japanese firms were forced to curtail their share of production in the semiconductor sector. In addition, firms across a wide range of sectors, including those in the automobile industry, were called on to shift their production sites overseas. Moreover, despite the yen's appreciation, firms left their export prices at the same time -- this was also described as "price destruction." The upshot is that it became the established practice for firms in Japan to pursue management

aimed at business restructuring and hold down margins while not raising employee wages. On this score, as Chart 19 shows, wage increases trailed the inflation rate for many years from the latter half of the 1990s, in what was deemed a deflationary period. Firms curbed wage hikes and refrained from passing on higher costs to selling prices, probably in the belief that they would lose competitiveness if they raised wages and prices. Once firms took for granted the core practice of leaving wages and selling prices unchanged, they became accustomed not to pass on higher costs to selling prices even if the cost of raw materials increased, seeking instead to absorb such increases by cutting costs. It became an unquestioned norm for firms to keep wages and prices unchanged. In fact, as Chart 20 indicates, recent research has shown that, for nearly two decades after the collapse of the bubble economy, Japanese firms secured profits by keeping wages down through increased wage markdowns, which reflected firms' market power in the market where they sell their products. In other words, firms secured profits in a kind of ongoing war of attrition.² I think that this can be taken as evidence of the long-standing deflationary pressure caused by a shrinking equilibrium.

Deeply-Entrenched Norm Grounded in Adverse Experience

As I have described, coping with changes in the post-bubble environment was a painful and traumatic experience for Japanese firms, and their response in the form of management with minimum assets and business restructuring led to a shrinking equilibrium. The norm that wages and prices do not rise subsequently became entrenched for nearly a quarter of a century. Empirical research has shown that the formation of inflation expectations in Japan is strongly influenced by the course of past events and is highly adaptive. This can be largely attributed to such negative post-bubble experience.³

To show how deeply entrenched the wage and price norm is, I would like to introduce an estimate associated with Japan's negative experience. Chart 21 shows, by generation, the period during which the cumulative return on investment was negative, assuming the monthly investment of a fixed amount in the Nikkei 225 Stock Average starting from age 22, when

² See Aoki, K., Hogen, Y., and Takatomi, K., "Price Markups and Wage Setting Behavior of Japanese Firms," *Bank of Japan Working Paper Series*, no. 23-E-5 (April 2023).

³ Economics commonly refers to the impact of a major shock on the economy as a "scarring effect."

many people are likely to begin working. With the ongoing rise in stock prices over the past decade or so, people in their 20s and 30s have experienced hardly any negative returns. On the other hand, those in their 40s and 50s have gone through negative returns for nearly half of their working life due to the prolonged post-bubble sluggishness in stock prices. While this is merely an estimate using stock prices as an example, it shows that those in their 40s and 50s in particular, the generation that currently makes up the core of firms and other economic entities, have suffered a long-term negative and traumatic experience. This is likely one of the factors behind the deeply-entrenched cautiousness in the behavior of firms and households that I mentioned earlier. It also suggests that a shift in such behavior could take longer than expected, perhaps the decade it takes to form the next generation. Likewise, in terms of the adaptive formation mechanism of inflation expectations, since the norm that wages and prices do not rise has been entrenched for such a long period, it can be assumed that any shift from cautious inflation expectations or any rise in expectations will take a far longer time than initially anticipated. It is also reasonable to assume that the formation mechanism of inflation expectations.

Changes in the Economic Environment since the 2010s and Recent Notable Developments However, there has already been a significant shift in the factors that guided firms' and households' behavior during the post-bubble period in Japan. First, the asset deflation that led firms to pursue management with minimum assets has improved significantly over the past decade. Asset prices have risen steadily since the beginning of the 2010s, mainly in the stock and real estate markets. The Nikkei 225 Stock Average has recovered to around a record high level. As for the competitive environment vis-à-vis other economies that led to the business restructuring of Japanese firms, the situation described as the six headwinds has improved as the yen's depreciation has progressed, and conditions have changed dramatically from when Japan faced trade friction.⁴ Today, changes in the economic environment, including from the

⁴ It was said that, following the Great East Japan Earthquake and to around 2012, firms faced six headwinds: the yen's appreciation; delayed negotiations on economic partnership agreements; high corporate tax rates; rigidity in the labor market; environmental regulations; and high electricity costs. However, this situation has now improved on the whole. For details, see Cabinet Office, *Annual Report on the Japanese Economy and Public Finance 2021 -- Towards a resilient Japanese economy: Accelerating innovation towards an economic society with strength and flexibility, September 2021; Cabinet Office, Annual Report on the Japanese Economy and Public Finance 2017: New Growth*

perspective of economic security, are giving rise to historic shifts, such as the shoring up of domestic production of semiconductors in Kumamoto and Hokkaido Prefectures.

The Assessment for Further Effective and Sustainable Monetary Easing, released by the Bank in March 2021, showed that, in addition to the lower funding costs transmission channel, the financial and capital markets channel (stock prices and foreign exchange rates) had also been significantly effective in translating the benefits of lower interest rates into improvement in the output gap (Chart 22). These findings suggest the likelihood that the Bank's monetary easing has contributed to the shift away from the asset deflation and the six headwinds -including the headwind of the yen's appreciation -- that prompted the changes in firms' behavior in the post-bubble economy. One reason why the Bank has patiently continued with monetary easing for many years is that it has taken time for the norm to change. At the same time, I consider that the Bank's patient continuation of monetary easing has also been contributing to the stability in Japan's financial markets through higher asset prices.

As shown in Chart 21, the decade-long improvements in asset deflation and in the competitive environment vis-à-vis other economies have led to the rise of a new, younger generation that never experienced the negative economic environment and the shrinking equilibrium of postbubble Japan. This generation -- also known as Generation Z in a global context -- is not haunted by the traumatic experience I have outlined. Their presence in Japan's economic activities has gradually expanded, and this may be one of the factors behind the changes in the core practice and the norm that have to date been so widespread in Japan. It can also be said that, after more than a decade, the rise of this new generation is starting to lead to signs of a long-awaited emergence from the shrinking equilibrium.

Firms' behavior that persisted after the bubble's collapse, typified as I said by management with minimum assets and business restructuring, is recently starting to shift, and there is also a change in firms' perception that the core practice of keeping wages and selling prices unchanged is an unquestioned norm. I take the highest level of wage hikes since the first half of the 1990s, which I referred to earlier, as an indication of a change in the war of attrition

Promoted by Technological Innovation and Work Style Reform, July 2017. These reports are summaries of the Japanese originals.

that continued after the bubble's collapse, involving wage cuts and a decline in price markups. Given these changes, I believe that Japan is moving out of a situation rooted in the assumption that wages and prices will not change -- the chronic deflationary cycle -- and has begun to enter into a cycle in which wages and prices both rise (Chart 23). In this situation, as firms become more flexible in their wage and price setting and their product strategies, I believe that a virtuous cycle has started to operate, one that involves firms' greater productivity and investment, including investment in human capital. The pass-through of cost increases to prices is still insufficient among small and medium-sized firms; however, triggered by such pass-through, some firms, including small and medium-sized ones, have started to step forward to improve their productivity and make investments. Moreover, while labor shortages and rising wages could lead some firms to give up on staying in business, it is possible to see these factors starting to encourage a certain degree of innovation among firms, through such means as business successions and mergers and acquisitions (M&As).⁵ My view is that one factor helping to give rise to the virtuous cycle involving firms' greater productivity and investment is that, under the Bank's continued monetary easing, firms' financial positions have improved as they have, over the years, taken measures such as reducing interest-bearing debt -- in other words, the groundwork for change has been in place. In the corporate sector, the interest burden has fallen to such an extent that interest income exceeds interest expenses in the overall sector, indicating the significant degree to which firms' financial positions have improved (Chart 24). This also suggests that the overall corporate sector is now more resilient to a rise in interest rates than before, should the Bank make an exit from the current monetary easing policy.

In terms of changes in social trends, there has also been a growing willingness to invest in social transformation, including moves toward digital transformation and global efforts toward achieving carbon neutrality. I believe that these developments warrant close attention as they could prompt a rethinking of the restrained stance toward investment. Various initiatives have also been launched in the labor market, including the introduction of new working styles. These changes could boost Japan's potential growth rate by means of capital

⁵ The Annual Report on the Japanese Economy and Public Finance for fiscal 2023 explains the positive relationship between markups and investment in intangible assets such as research and development (R&D) and human capital by drawing on data from the Ministry of Economy, Trade and Industry's Basic Survey of Japanese Business Structure and Activities.

accumulation, higher labor market mobility, and productivity growth.

Another recent notable change is the rapid growth in nominal GDP. It has now reached 596 trillion yen, approaching the government's 2015 target of 600 trillion yen. Since corporate activity, in terms of sales, profits, and wages, is based on nominal terms, I believe that it is also worth noting that economic activity is expanding on a nominal basis (Chart 25).

Balance-Sheet Adjustments during the Post-Bubble Period and Central Bank Finances

Looking back at the post-bubble period, a reduction in assets and liabilities by firms as shown in Chart 14 -- namely, balance-sheet adjustments -- caused financial institutions to incur losses in the process of disposing of non-performing loans, which led to the injection of public funds into these institutions. Furthermore, the overall economic downturn brought about an expansionary trend in fiscal spending, leading to an increase in government debt. At the same time, as maintaining price stability became a major challenge for the Bank of Japan, it introduced unconventional monetary policy measures. In other words, the situation can be described as a balance-sheet adjustment for the country as a whole, driven by asset deflation. The upshot of this process is that the Bank now holds nearly half of all JGBs issued, bearing much of the market's interest rate risk. Questions and concerns are often heard about the Bank's financial soundness. In what follows, I would like to talk about central bank finances, focusing especially on the monetary tightening phase.⁶

When a central bank expands its balance sheet by purchasing government bonds and other assets as part of its large-scale monetary easing, there is an increase in the holdings of government bonds and other assets on the asset side and current deposits on the liability side. Since the interest rate on government bonds purchased usually exceeds the interest rates on current deposits -- i.e., the yield spread is positive -- overall profits increase in line with the rise in holdings of government bonds and other assets. On the other hand, in the exit phase when monetary policy moves toward tightening and the balance sheet shrinks, the central bank will raise the interest rate on current deposits to control interest rates. As a result, its interest expenses will increase, putting downward pressure on its profits. Thus, once the

⁶ Monetary Affairs Department, Bank of Japan, "Central Bank Finances and Monetary Policy Conduct," *BOJ Reports and Research Papers*, December 2023.

central bank enters the exit phase, its profits will be under downward pressure for a while. However, in addition to the decline in interest expenses as current deposits decrease, the central bank will likely increase interest income; it will reinvest proceeds from the redemption of maturing government bonds, and will replace them with higher yielding bonds in due course. Therefore, the central bank's profits will eventually recover in the long run. Also, even if the holdings of government bonds incur temporary valuation losses, these losses do not directly affect the central bank's actual profits or losses because the bank assesses its losses using the amortized cost method. The structure of central bank finances thus ensures profits from a long-term perspective. Moreover, because a central bank can supply its own means of payment and settlement, even if there is a temporary loss or negative equity, this does not impede the central bank's ability to conduct monetary policy. That said, this does not imply that the central bank can run up unlimited losses and negative equity. I believe that it is crucial for the central bank to work on conducting appropriate policies, while also paying attention to financial soundness to avoid undermining its credibility.

The finances of central banks are thus quite different from those of private financial institutions or business corporations. I spoke earlier about Japan's overall balance-sheet adjustment after the collapse of the bubble economy. It can be understood that the large-scale monetary easing the Bank has been conducting to date to achieve price stability has, as a result, supported in part the process of Japan's overall balance-sheet adjustment, through the effective use of the financial characteristics of a central bank.

I have focused on changes in firms' behavior and the entrenchment of the norm during the post-bubble period. I believe that, after more than a decade since the shift in the factors that guided firms' and households' post-bubble behavior, Japan is finally reaching an inflection point where this behavior will start to turn positive. The outlook I mentioned earlier -- that there could be a gear shift to adjust the degree of monetary easing down from the current extremely powerful level -- reflects such developments. Later, I would appreciate hearing your candid opinions.

Thank you.



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TAKATA Hajime Member of the Policy Board Bank of Japan

Chart 1

Developments in Overseas Economies (IMF's January 2024 WEO Update)



Major Economies Growth Rates						
				y/y % ch	g., % points	
		CY 2022	CY 2023	CY 2024	CY 2025	
		C I 2022	CT 2023	[Forecast]	[Forecast]	
World		3.5	3.1	3.1	3.2	
				(0.2)	(0.0)	
	Advanced economies	2.6	1.6	1.5	1.8	
				(0.1)	(0.0)	
	United States	1.9	2.5	2.1	1.7	
				(0.6)	(-0.1)	
	Euro area	3.4	0.5	0.9	1.7	
				(-0.3)	(-0.1)	
	United Kingdom	4.3	0.5	0.6	1.6	
				(0.0)	(-0.4)	
	Japan	1.0	1.9	0.9	0.8	
				(-0.1)	(0.2)	
	Emerging market and leveloping economies	4.1	4.1	4.1	4.2	
•				(0.1)	(0.1)	
	China	3.0	5.2	4.6	4.1	
				(0.4)	(0.0)	
	India	7.2	6.7	6.5	6.5	
				(0.2)	(0.2)	
	ASEAN-5	5.5	4.2	4.7	4.4	
				(0.2)	(-0.1)	

Major Economies' Growth Rates

Note: In the table, figures in brackets are the differences from the forecasts in the October 2023 *World Economic Outlook* (WEO). ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Source: IMF.



Real GDP Growth Rate

Note: Private final demand = private demand - change in private inventories. Source: Cabinet Office.

Chart 3

Real GDP



Sources: Cabinet Office; Eurostat; U.S. Bureau of Economic Analysis.

Chart 4

Output Gap



Chart 5







Sources: Haver; Ministry of Internal Affairs and Communications.

Forecasts of the Majority of the Policy Board Members (January 2024 Outlook Report)

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	Real GDP	CPI (all items less fresh food)	(Reference) CPI (all items less fresh food and energy)
Fiscal 2023	+1.6 to +1.9	+2.8 to +2.9	+3.7 to +3.9
	[+1.8]	[+2.8]	[+3.8]
Forecasts made in October 2023	+1.8 to +2.0	+2.7 to +3.0	+3.5 to +3.9
	[+2.0]	[+2.8]	[+3.8]
Fiscal 2024	+1.0 to +1.2	+2.2 to +2.5	+ 1.6 to +2.1
	[+1.2]	[+2.4]	[+1.9]
Forecasts made in October 2023	+0.9 to +1.4	+2.7 to +3.1	+1.6 to +2.1
	[+1.0]	[+2.8]	[+1.9]
Fiscal 2025	+1.0 to +1.2	+1.6 to +1.9	+1.8 to +2.0
	[+1.0]	[+1.8]	[+1.9]
Forecasts made in October 2023	+0.8 to +1.2	+1.6 to +2.0	+1.8 to +2.2
	[+1.0]	[+1.7]	[+1.9]

Notes: 1. Figures in brackets indicate the medians of the Policy Board members' forecasts (point estimates).
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which they attach the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.
3. Each Policy Board member makes their forecasts taking into account the effects of past policy decisions and with reference to views

incorporated in financial markets regarding the future conduct of policy.

Source: Bank of Japan.

Short-Term Real Interest Rate (1-Year) Long-Term Real Interest Rate (10-Year) 1.5 1.5 1.0 1.00.5 0.5 0.0 0.0 -0.5 -0.5 -1.0 -1.0 -1.5 -1.5 Short-term nominal interest rate Long-term nominal interest rate Inflation expectations □Inflation expectations -2.0 -2.0 Short-term real interest rate (1-year) -Long-term real interest rate (10-year) -2.5 -2.5 22 CY10 12 14 16 18 20 CY10 12 14 16 18 20 22

Note: Figures for real interest rates are calculated by deducting inflation expectations from JGB yields for each maturity. Figures for inflation expectations are based on Bank staff calculations using the expectations of various economic entities (firms, households, and experts) at different horizons. Specifically, the data used in the calculations are as follows: for firms, the *Tankan*; for households, the *Opinion Survey on the General Public's Views and Behavior*; for experts, the *QUICK Survey*, the *Consensus Forecasts*, and inflation swap rates. Sources: Bloomberg; Consensus Economics Inc., Consensus Forecasts; QUICK, QUICK Monthly Market Survey <Bonds>; Bank of Japan.

Chart 7

Real Interest Rates



Chart 9



Note: Figures for the United States are for the CPI for all items, while those for Japan are for the CPI for all items excluding fresh food. The pre-pandemic distribution for Japan is based on data for September 2019, which was before CPI developments were affected by the consumption tax hike.

Sources: Ministry of Internal Affairs and Communications; U.S. Bureau of Labor Statistics.



Wage Growth Rate

Note: Figures from 1980 to 2014 are those published by the Central Labour Relations Commission, while those from 2015 to 2023 are figures released by Rengo.

Sources: Central Labour Relations Commission; Japanese Trade Union Confederation (Rengo).

Chart 11

Inflation Expectations



Note: Figures for economists are the forecasts of forecasters surveyed for the *ESP Forecast*. Figures for households are from the *Opinion Survey on the General Public's Views and Behavior*, estimated using the modified Carlson-Parkin method for a 5-choice question. Figures for firms show the inflation outlook of enterprises for general prices (all industries and enterprises, average) in the *Tankan*.

Sources: JCER, ESP Forecast; QUICK, QUICK Monthly Market Survey <Bonds>; Bank of Japan.

Chart 12



Phillips Curve

Note: The CPI figures exclude fresh food and energy, for which prices are volatile. They also exclude temporary factors, which consist of the effects of the reduction in mobile phone charges, consumption tax hikes, free education policies, and travel subsidy programs. These Phillips curves are based on statistical estimates and should be interpreted with some latitude.

Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

Chart 13

Long-Term Developments in Real GDP Growth Rate



Note: Figures from fiscal 1981 to 1994 are based on simplified retroactive adjustments. Source: Cabinet Office.



My View on Firms' Behavior in the Post-Bubble Period

Chart 15

Potential Growth Rate and Natural Rate of Interest



Natural Data of Latoroat

Notes: 1. In the left panel, figures are Bank staff estimates.

In the right panel, shaded areas show the range between the lowest and the highest estimated values at each point in time, using the models indicated.

Sources: Bloomberg; Cabinet Office; Consensus Economics Inc., Consensus Forecasts; Ministry of Finance; Ministry of Internal Affairs and Communications; Bank of Japan.

Chart 16



Stock Market Capitalization

Note: In the right panel, figures are the market capitalization of listed domestic companies (current US\$) from the World Development Indicators.

Sources: Japan Exchange Group; World Bank.

Chart 17



Capital Adequacy Ratio of Firms

Note: Figures are based on the *Financial Statements Statistics of Corporations by Industry, Annually*, and exclude the finance and insurance industries.
 Source: Ministry of Finance.



U.S. Dollar/Yen

Source: Bank of Japan.

Chart 19





Notes: 1. The CPI figures are Bank staff estimates and exclude temporary factors, which consist of the effects of the reduction in mobile phone charges, consumption tax hikes, free education policies, and travel subsidy programs. The figure for fiscal 2023 is the April 2023-January 2024 average.
2. Figures for nominal wages are for establishments with 30 or more employees up through fiscal 1990, and with 5 or more employees from fiscal 1991 onward. The figure for fiscal 2023 is the April-December average.

Sources: Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.

Chart 20



Price Markups and Wage Markdowns

Note: Figures are based on all firm sizes and all industries. See Aoki, K., Hogen, Y., and Takatomi, K., "Price Markups and Wage Setting Behavior of Japanese Firms," *Bank of Japan Working Paper Series*, no. 23-E-5.

Sources: Cabinet Office; CRD Association; Development Bank of Japan; Ministry of Economy, Trade and Industry; Ministry of Health, Labour and Welfare.

Chart 21



An Estimate of the Period with Negative Cumulative Returns share of the investing years, % 50s average: 53% 40s average: 35% 20s average 11% 30s average: 13%

Note: Cumulative returns are estimated as of the end of 2023 by age of investors based on the assumption that a fixed amount of the Nikkei 225 Stock Average is purchased every month since the beginning of the year when an individual turns 22. They are calculated by dividing "years with negative cumulative returns as of the year end" by "total years of investment."

Source: Bloomberg.

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Transmission Channels of Lower Interest Rates

- Notes: 1. Figures are based on a VAR model with coefficient restrictions using eight variables: output gap, interest rates (3-month), interest rate spreads (2-year minus 3-month, 5-year minus 2-year, 10-year minus 5-year), aggregate funding costs, nominal effective exchange rates of the yen, and stock prices. 2. Aggregate funding costs are the weighted average of bank lending rates and issuance yields for CP and corporate bonds. 3. In the right panel, figures show the 5-year cumulative effects.

 - 4. For details, see Bank of Japan, "Assessment for Further Effective and Sustainable Monetary Easing," 2021.

Sources: Bloomberg; Bank of Japan; etc.

Chart 23

Virtuous Cycle of Wages and Prices

Chronic Deflationary Cycle

Cycle of Increasing Wages and Prices



Note: This chart is based on Watanabe Tsutomu, Sekai infure no nazo [Mystery of global inflation] (2022).



Interest Balance

Note: Interest balance for small and medium-sized enterprises (SMEs) in the left panel includes dividend income. Sources: Cabinet Office; Ministry of Finance.

Chart 25



Nominal and Real GDP

Note: Figures before 1995 are based on simplified retroactive adjustments. Source: Cabinet Office.